

REMARKS

Applicant has carefully reviewed the Official Action dated January 21, 2002 and this Amendment is intended to be fully responsive to the Action.

The specification was objected to at page 8, line 7 ("of the drive motor"). Applicant submits that this language is grammatically correct and technically accurate because the planar configuration permits affixation of the drive motor to the other structural components. In an effort to expedite prosecution, Applicant has amended the specification in the manner suggested by the Examiner. No new matter has been entered.

Claims 1-13 were rejected under 35 U.S.C. §112, second paragraph, for indefinite claim language. The claims have been reviewed and amended to correct the issues noted by the Examiner to comply with the requirement of 35 U.S.C. §112. Applicant submits that the language of claim 6 meets the requirements of 35 U.S.C. §112 without further amendment. No new matter has been entered.

Claims 1-3, 5-8 and 10-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (USP 4,730,414) in view of Tenbrink et al. '663. Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. '414 in view of TenBrink et al. '663 and Kimura et al. Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. '414 in view of Tenbrink et al. '663 and Marsholl et al. These rejections are respectfully traversed in view of the above amendments and the following comments.

Nakamura et al. '414 teaches a system including a hinged assembly to account for door curvature. In Nakamura et al. '414, two slide plates 7A, 7B are guided in rails 1A, 1B. Each of the slide plates 7A, 7B is connected to the window pane holder 28 via a cross plate 26 and a bracket 17A, 17B which is rotatably connected to each slide plate 7A or 7B.

Notably, each slide plate 7A, 7B is pivotally connected to bracket 17A, 17B via two pairs of links 13, 14 and two spaced pivot pins 15, 16.

Furthermore, a biasing force is provided by a spring 24 such that the paired links 13, 14 are biased to rotate in a counterclockwise direction (see Fig. 4 of Nakamura et al. '414) about the respective pivot pins 15 and 16.

As a result of the hinge assembly, the distance of the window pane holder 28 or the window pane 27 relative to the slide plates 7A, 7B can be modified during the movement of the window pane between the opened and closed positions.

Nakamura et al. '414 fails to disclose an arrangement where "actuators (12, 13) are rigidly connected to each other by a rigid coupling (11) such that the actuators are non-movably and non-pivotally fixed to the rigid coupling", such that the actuators 12, 13 and the rigid coupling do not have any degree of freedom for movement relative to each other.

Apparently, the Examiner has taken a very broad interpretation of the term "actuator" as set forth in the claimed invention. In an effort to expedite prosecution, Applicant has further amended the independent claims 1 and 13 to more specifically describe the structure of the actuators to include a "slide component" guide in a window-lift guide whereby the "slide components are non-movably and non-pivotally fixed to the rigid coupling". Support for the language set forth in the newly amended claims is found at page 4, lines 3-9 of the original specification.

The amended claims clearly define over Nakamura et al. '414 since the slide plates 7A, 7B are certainly not rigidly connected to each other by a rigid coupling. Indeed, the entire purpose and intent of Nakamura et al. '414 is to provide a hinged arrangement that permits the window pane to pivot relative to the slide plates 7A, 7B and the guide rails 1A, 1B.

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In re MARCHOLL, et al.

The balance of the prior art fails to teach the deficiencies present in Nakamura et al. '414. Indeed, any modification of Nakamura et al. '414 to provide the rigid coupling set forth in the claims would impermissibly destroy the intended structure and function of Nakamura et al. '414.

In view of the above amendment, it is respectfully submitted that the pending claims define the invention over the prior art of record and notice to that affect is earnestly solicited. Should the Examiner believe further discussion regarding the above claim language would expedite prosecution, he is invited to contact the undersigned at the number listed below.

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In re MARCHOLL, et al.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

MARSCHOLL, K.



Serial No. : 09/401,495

Examiner: STRIMBU

Filed : September 22, 1999

Group Art Unit: 3634

Title: MOTOR VEHICLE WINDOW LIFT WITH RIGIDLY COUPLED ACTUATORS IN
THE LIFT-OPERATING POSITION

APPENDIX SHOWING AMENDMENTS

IN THE SPECIFICATION

Please amend the last line of the paragraph extending from page 7, line 8 to page 8, line 7
as follows:

Fig. 1 shows a first embodiment of the window lift of the invention. The mounting structure 2 assumes a substantially rectangular, slightly rhomboid overall shape. Guides 6, 7 are present at both horizontal outer sides and illustratively are guide rails. The width of the mounting structure 2 is selected to be substantially less than that of the door or the width of the window and preferably may be about half the window width or less. A drive means 4 is present at the lower portion of the mounting structure, a drive roller of said drive means being looped by a cable system 8 which is guided over four reversing rollers 10 each configured in an outer corner zone of the mounting structure 2. Substantially mutually parallel cable segments 3, 5 of the cable

system 8 run between two approximately vertically superposed and slightly horizontally offset reversing rollers 10. When the drive roller of the drive means 4 is rotating, the cable segments 3, 5 are displaced up or down, according to the direction of rotation of said roller, essentially parallel to the guides 6, 7. As a result the actuators 12, 13, or the slides, being connected to the cable segments 3, 5, also are displaced up or down and thereby the window pane connected to the actuators 12, 13 shall be lowered or raised. The two slides, or the actuators 12 or 13, and hence the cable segments 3, 5, are joined to each other by a rigid coupling 11, for instance a crossbar 14. This rigid coupling 11, i.e. the crossbar 14 mounted between the actuators 12, 13, implements exceedingly high stability of the window lift of the invention, ultimately making possible the reduction in width of the mounting structure 2. Adjusting elements 16, which are shown in more detail in Fig. 2, are present in the crossbar 14 to act on the two cable ends of the cable system 8. The adjusting elements 16 allow adjusting the actuators 12, 13, i.e. the rigid coupling 11, in relation to the cable system 8. It must also be borne in mind that the guides 6, 7 are connected by braces crossing one another at an acute angle and affixed to the guide end zones. These brackets crossing each other at an acute angle may be in the form of planar parts or the like to affix aggregations of components, for instance, [of] the drive motor.

IN THE CLAIMS

Please amend claims 1, 4-6 and 13 as follows.

1. (Amended) A motor-vehicle window lift for lifting a window pane from a lower position to an upper position comprising a mounting structure (2), a drive system (4) for actuating a lift operating condition, a cable system (8) having two cable segments (3, 5) running substantially parallel to each other [when said window pane is lifted from said lower position to said upper position], several reversing rollers (10) for the cable system (8) and two actuators (12, 13) for the window pane, each affixed to a respective one of the cable segments (3, 5), said two actuators (12, 13) being displaceably guided and slidably fixed respectively directly to first and second guides (6, 7) on the mounting structure (2), wherein

[the two actuators (12, 13) are rigidly connected to each other by a rigid coupling (11) such that the actuators are non-movably and non-pivotally fixed to the rigid coupling]

each of said two actuators (12, 13) is provided with a slide component guided in a window-lift guide, the slide component for each of said two actuators being rigidly connected to each other by said rigid coupling such that the slide components are non-movably and non-pivotally fixed to the rigid coupling.

4. A window lift as claimed in claim 1, wherein the width of [at least one of] the mounting structure (2) [and the separation between the cable segments (3, 5)] is less than approximately 2/3 the width of the window pane.

5. A motor-vehicle window lift for lifting a window pane from a lower position to an upper position comprising a mounting structure (2), a drive member (4), a cable system (8) having two cable segments (3, 5) running substantially parallel to each other [when said window pane is lifted from said lower position to said upper position], several reversing rollers (10) for the cable system (8) and [two] first and second actuators (12, 13) for the window pane, each affixed to a respective one of the cable segments (3, 5), [at least one of] said [actuators (12, 13)] first actuator being displaceably guided and slidably fixed directly to at least one guide (6, 7) on the mounting structure (2), wherein the [two] first and second actuators (12, 13) are connected to each other by a rigid coupling (11) such that the actuators are non-movably and non-pivotally fixed to the rigid coupling in a lift operating condition, and wherein

[one of] said [actuators] second actuator is affixed to one of the cable segments (3, 5) remote from the at least one guide (6, 7) such that said [one of said actuators] second actuator is not guided by said at least one guide (6, 7).

13. A motor-vehicle window lift for lifting a window pane from a lower position to an upper position comprising a mounting structure (2), a drive system (4) for actuating a lift operating condition, a cable system (8) having two cable segments (3, 5) running substantially parallel to each other [when said window pane is lifted from said lower position to said upper position], several reversing rollers (10) for the cable system (8) and two actuators (12, 13) for the window pane, each affixed to a respective one of the cable segments (3, 5), said two actuators (12, 13) being displaceably guided and slidably fixed respectively directly to first and second guides (6, 7) on the mounting structure (2), wherein

the two actuators (12, 13) are each provided with a slide component guided in a window-lift guide, the slide components being rigidly connected to each other by a rigid coupling (11) such that the [actuators] slide components are non-movably and non-pivotally fixed to the rigid coupling, and the window pane is connected to the actuators (12, 13).

Please add new claim 14 as follows.

14. A window lift as claimed in claim 1, wherein the separation between the cable segments (3, 5) is less than approximately $\frac{2}{3}$ the width of the window pane.